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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/426,509	04/21/95	ULLRICH A	7683-074

HM22/0526
PENNIE & EDMONDS
1155 AVENUE OF THE AMERICAS
NEW YORK NY 10036-2711

EXAMINER	
TENG, S	
ART UNIT	PAPER NUMBER
1646	27

DATE MAILED: 05/26/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant
08/426,509	Ullrich et al.
Examiner	**Group Art Unit**
Sally Teng	1646

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *three* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *31-37, 40-45, 48-52, and 55* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) *31-37, 40-45, and 48* is/are allowed.

☒ Claim(s) *49-52 and 55* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☑ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

1. This application is reopen for prosecution in view of the IDS filed July 2, 1997.

2. Claims 31-37, 40-45, 48-52, and 55 are pending in the instant application.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CAR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 49-52 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avraham et al. (WO 93/15201) in view of Sambrook et al.

Avraham discloses the nucleic acid encoding a human megakaryocytic polypeptide containing SEQ ID NO: 6 of the present application or comprising a SH2, SH3 or a catalytic domain of SEQ ID NO: 6. The nucleic acid sequence and the deduced amino acid sequence are

shown in figure 5 (SEQ ID NO: 19 and 20) of Avraham. However, Avraham does not disclose the polypeptide comprising SEQ ID NO: 6 or fusion proteins comprising the polypepide having SEQ ID NO: 6 and another polypeptide.

Sambrook teaches method steps for expression of isolated genes in mammalian cells and *E. coli* (Vol. 3, Chapter 16 and 17). The method of Sambrook involves subcloning the desired gene into an expression vector and transfecting the expression vector into a host cell. Sambrook also discloses expression vectors comprising transcriptional elements, such as promoter, enhancer, or termination and polyadenylation signals appropriate for mammalian or bacterial host cell expression (Fig. 16.1 A-F, 16.3 A-C,16.6 A-B and page 17.11-17.28). Sambrook also teaches in chapter 17, method steps for producing desired fusion proteins.

Accordingly, it would have been obvious to the skilled artisan at the time the invention was made to obtain the polypeptide encoded by SEQ ID NO: 19 of Avraham by subcloning the nucleic acid having SEQ ID NO: 19 into an expression vector and transfecting the expression vector into a host cell as taught by Sambrook with the expectation of obtaining large quantities of the polypeptide. Given the teachings of Avraham and Sambrook, it would also have been obvious to the skilled artisan to obtain fusion protein comprising the protein having SEQ ID NO: 6 and another protein. The motivation to obtain the encoded polypeptide is provided by Avraham who teaches that the proteins of Avraham may play an important role in cell growth and differentiation. The nucleic acid of Avraham (SEQ ID NO: 19) and of the present application (SEQ ID NO: 5) are sufficiently identical that they would hybridize to each other under highly stringent conditions.

Thus, the claims are *prima facie* obvious over the prior art.

4. Claims 49-52 and 55 are rejected under 35 U.S.C. 102(e) as being anticipated by Bennett et al.

Bennett discloses the nucleic acid encoding a human megakaryocytic polypeptide containing SEQ ID NO: 6 or comprising a SH2, SH3 or a catalytic domain of SEQ ID NO: 6. The nucleic acid sequence and deduced amino acid sequence of the polypeptide of Bennett are shown in figure 5 (SEQ ID NO: 19 and 20). Bennett also teaches fusion proteins comprising a human mekgakaryocytic polypeptide and a different polypeptide (Cols. 8 and 9). However, Bennett does not disclose the polypeptide comprising SEQ ID NO: 6 or a fusion protein comprising the polypeptide having SEQ ID NO: 6.

Sambrook teaches method steps for expression of isolated genes in mammalian cells and *E. coli* (Vol. 3, Chapter 16 and 17). The method of Sambrook involves subcloning the desired gene into an expression vector and transfecting the expression vector into a host cell. Sambrook also discloses expression vectors comprising transcriptional elements, such as promoter, enhancer, or termination and polyadenylation signals appropriate for mammalian or bacterial host cell expression (Fig. 16.1 A-F, 16.3 A-C,16.6 A-B and page 17.11-17.28). In chapter 17, Sambrook teaches method steps for obtaining desired fusion proteins.

Accordingly, it would have been obvious to the skilled artisan at the time the invention was made to obtain the polypeptide encoded by SEQ ID NO: 19 of Bennett by subcloning the

nucleic acid having SEQ ID NO: 19 into an expression vector and transfecting the expression vector into a host cell as taught by Sambrook with the expectation of obtaining large quantities of the polypeptide. The motivation to obtain the encoded polypeptide is provided by Bennett who teaches that protein tyrosine kinases play an important role in cell growth and differentiation. The nucleic acid of Bennett (SEQ ID NO: 19) and of the present application (SEQ ID NO: 5) are sufficiently identical that they would hybridize to each other under highly stringent conditions. It would also have been obvious to the skilled artisan at the time the invention was made to obtain fusion proteins comprising the polypeptide of SEQ ID NO: 6 and another polypeptide, given the teachings of Bennett and Sambrook.

Thus, the claims are *prima facie* obvious over the prior art.

5. Claims 31-37, 40-45, and 48 are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sally Teng, Ph.D., whose telephone number is (703) 308-4230. The examiner can normally be reached on Mon.-Fri. from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lila Feisee, can be reached on (703) 308-2731.

Official papers filed by fax should be directed to (703) 305-3014. Faxed draft or informal communications with the examiner should be directed to (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

May 17, 1999

SALLY TENG
PRIMARY EXAMINER